

ABSTRACT OF THE DISCLOSURE

5 A data processing system includes: at least one
function module connected to a single system bus; a data
transfer controller which outputs a first bus use
permission request signal based on a data transfer request
signal output from the at least one function module; a
central processing unit connected to the system bus which
outputs a second bus use permission request signal; an
10 arbitration controller for determining, based on the
first and second bus use permission request signals, which
of the data transfer controller and the central processing
unit should obtain a permission to use the system bus;
a section for setting a first data amount which can be
15 continuously transferred by the at least one function
module; a section for suspending an output of the first
bus use permission request signal to the arbitration
controller for at least one clock cycle after a data
transfer by the at least one function module is completed;
20 and a section for giving the permission to use the system
bus to one of the data transfer controller and the central
processing unit in such a manner that the data transfer
controller has a priority over the central processing unit
during a period when the first bus use permission request

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signal is being issued.

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